

July 14, 2000

TO: Stakeholders for the CANAMEX Corridor

FROM: James M. Bourey, Executive Director  
Mary Peters, Director, ADOT

SUBJECT: STAKEHOLDER FORUM FOR THE JOINT MAG-ADOT CANAMEX CORRIDOR STUDY

Monday, July 24, 2000 – 2:00 p.m.  
MAG Office, Suite 200, Saguaro Room  
302 North 1st Avenue, Phoenix

The Maricopa Association of Governments (MAG) and the Arizona Department of Transportation (ADOT) have developed a possible recommendation for a route through the Maricopa region to be designated as the CANAMEX Corridor. A Forum has been scheduled for the time and place noted above to present the recommendation and to receive feedback from affected agencies and other stakeholders. An agenda for the Forum is attached along with a summary of the recommendation. Representatives from MAG member agencies as well as affected trucking groups, landowners/developers and community associations are encouraged to participate. **Please park in the garage under the building. Bring your ticket to the Forum as parking will be validated. Bicycles can be locked in the rack at the entrance to the parking garage.**

Starting from the junction of I-8 and I-10 and proceeding westward and northward, the recommended route includes: I-8, SR 85, I-10, the Sun Valley Parkway (extended north to US 60), US 60, the Wickenburg Bypass, and US 93. The exact alignments for the Sun Valley Parkway extension and the Wickenburg Bypass have not yet been determined. Highlights of the recommended route include:

- A by-pass route in the Wickenburg area,
- A northward extension of the Sun Valley Parkway to connect to US 60, and
- An upgrade of SR 85 between Gila Bend (junction with I-8) and Buckeye (junction with I-10) to four-lane freeway standards.

A Stakeholder Forum held November 1999 reviewed a master list of alternative routes as well as draft evaluation criteria and design guidelines. Eight alternative routes were short-listed following the feedback received at that Forum. Subsequently, the consulting firm Kimley-Horn and Associates Incorporated conducted research and compiled data for the evaluation of the short-listed routes against the criteria established for the project (see the attached executive summary from their report). Additionally, all MAG member agencies were surveyed in a December 28, 1999 memo for their perspective on the potential benefits and impacts of each of the alternative routes under consideration. A meeting with landowners / developers organized by WESTMARC was held on February 18, 2000. Additional public input will be sought following this Forum.

If you have any questions or comments, please contact Chris Voigt or me at (602) 254-6300.

Attachments

**STAKEHOLDER FORUM**  
**MAG-ADOT CANAMEX CORRIDOR STUDY**

2:00 p.m., Monday, July 24, 2000  
Saguaro Room, Second Floor, 302 North First Avenue  
Phoenix, AZ

**DISCUSSION TOPICS**

1.     Introduction
2.     Project Overview  
A brief overview of the study process and agency and public feedback received will be presented.
3.     Recommendation  
The recommendation for the designation of the CANAMEX Corridor through the Maricopa region will be presented.
4.     Discussion  
The recommendation as well as any related issues will be the subject of an open discussion to be held between representatives of MAG member agencies and other key stakeholders.
5.     Call to the Public  
An opportunity will be given for members of the public to address the Forum. Speakers will be requested not to exceed a three-minute time period for their comments.
6.     Next Steps  
Additional public input opportunities will be scheduled starting late August 2000. A recommendation for designation of the CANAMEX Corridor through the Maricopa region is expected to then be brought to the MAG Regional Council and the State Transportation Board for approval.

**JOINT RECOMMENDATION  
FOR THE CANAMEX CORRIDOR  
THROUGH THE MARICOPA REGION**

**Maricopa Association of Governments  
Arizona Department of Transportation**

**Draft July 2000**

## **JOINT RECOMMENDATION FOR THE CANAMEX CORRIDOR THROUGH THE MARICOPA REGION**

### **INTRODUCTION**

While the CANAMEX Corridor has been defined in federal legislation as a national trade route extending from Canada to Mexico, the exact location of the route through Maricopa County has yet to be specified. To address this issue, a joint study by the Maricopa Association of Governments (MAG) and the Arizona Department of Transportation (ADOT) was undertaken. Eight alternative routes for the Corridor through the Maricopa region were studied. A 145-mile regional by-pass route, shown in Figure 1, is recommended for designation as the CANAMEX Corridor through the Maricopa region.

Starting from the junction of I-8 and I-10 and proceeding westward and northward, the recommended route includes: I-8, SR 85, I-10, the Sun Valley Parkway (extended north to US 60), US 60, the Wickenburg Bypass, and US 93. The exact alignments for the Sun Valley Parkway extension and the Wickenburg Bypass have not yet been determined.

Highlights of the recommended route include:

- A by-pass route in the Wickenburg area (two alternatives are shown),
- A northward extension of the Sun Valley Parkway to connect to US 60, and
- An upgrade of SR 85 between Gila Bend (junction with I-8) and Buckeye (junction with I-10) to four-lane freeway standards.

Figure 1 also shows alternative urban access routes that will continue to exist and be used for commercial and other traffic into and out of the region. The designation shown in Figure 1 of a specific route as the CANAMEX Corridor through the Maricopa region is not intended to preclude commercial or other traffic from using any other route within or around the urban area.

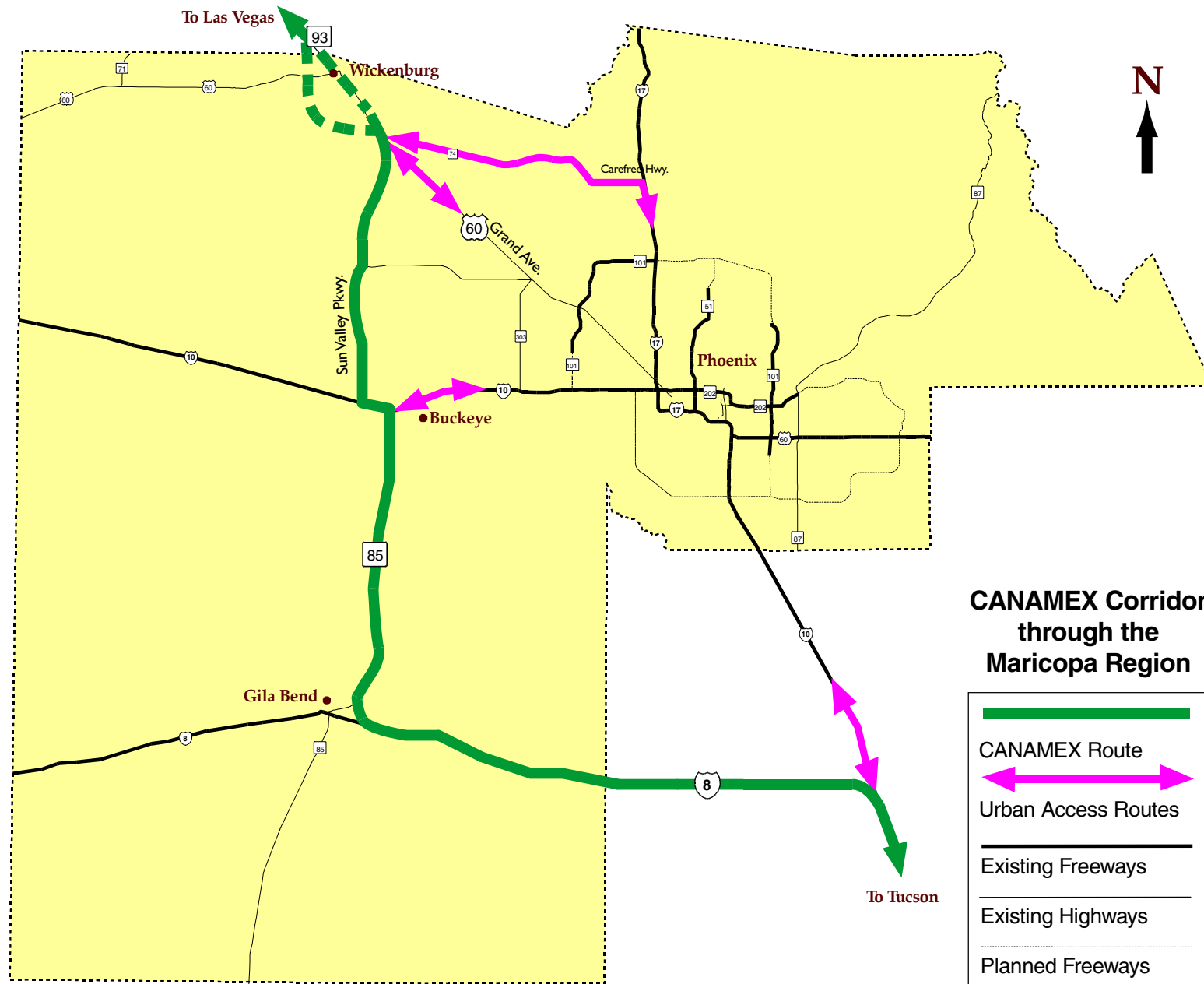


Figure 1: CANAMEX Corridor through the Maricopa Region

## **NATIONAL CORRIDOR**

The CANAMEX Corridor is one of forty-three national corridors identified in the federal Intermodal Surface Transportation Efficiency Act (ISTEA), the 1995 National Highway System (NHS) Designation Act, and the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) as “high priority” corridors. Section 1105 of the NHS Designation Act specifies the CANAMEX Corridor to run from “Nogales, Arizona, through Las Vegas, Nevada, to Salt Lake City, Utah, to Idaho Falls, Idaho, to Montana, to the Canadian Border”.

In the State of Arizona, the CANAMEX Corridor has been designated to generally follow: “(i) I-19 from Nogales to Tucson; (ii) I-10 from Tucson to Phoenix; and (iii) United States Route 93 in the vicinity of Phoenix to the Nevada Border”. The route within the Maricopa region or Phoenix metropolitan area has not been defined in federal legislation to date.

## **MAG – ADOT JOINT STUDY PROCESS**

Due to strong interest expressed by many member agencies, MAG and ADOT initiated a corridor study in late 1999 to select a route for the CANAMEX Corridor through the Maricopa region. The final designation of the corridor needs joint approval of the MAG Regional Council and the State Transportation Board.

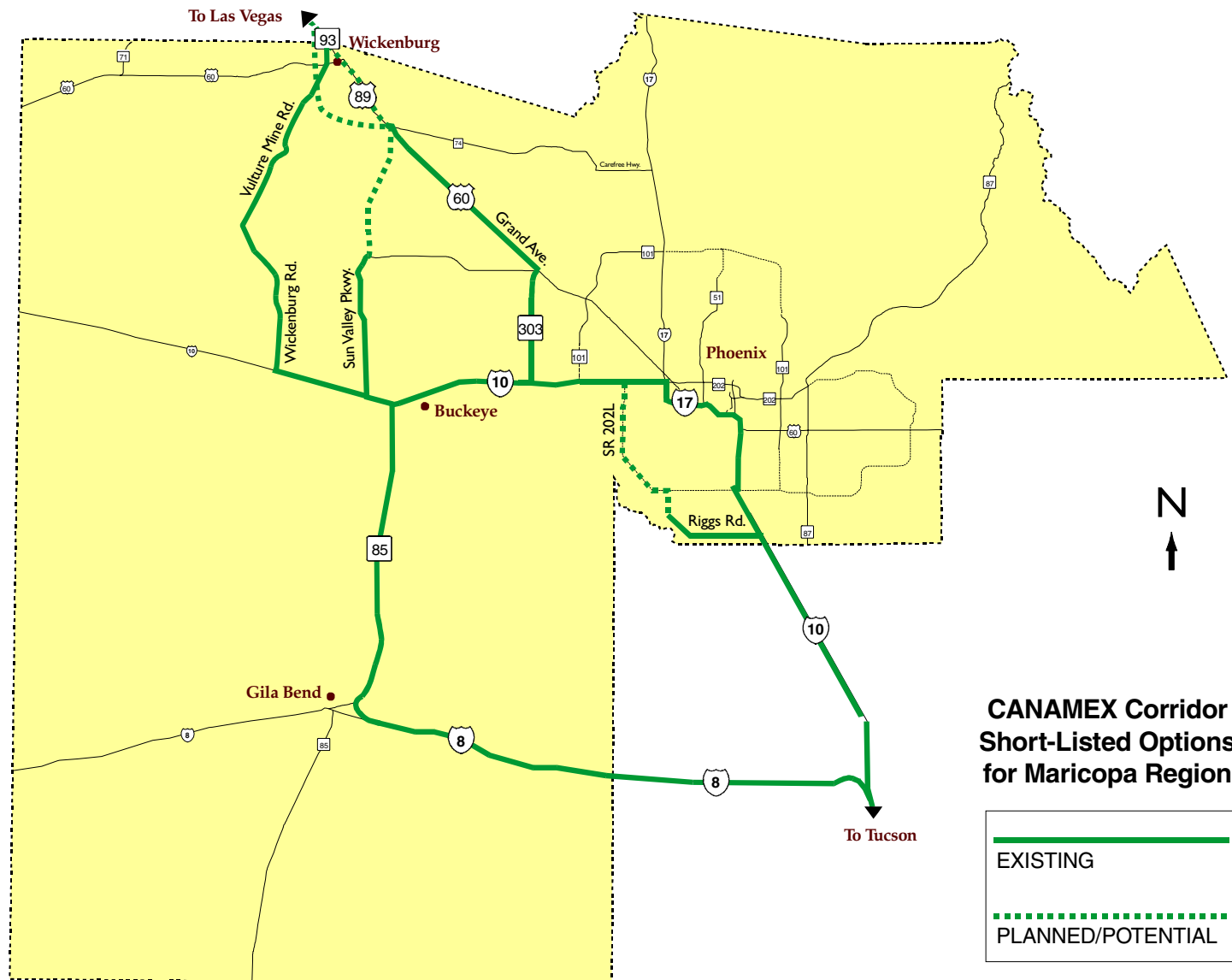
To initiate the project, drafts of an initial or master list of alternative routes, evaluation criteria, design guidelines and public involvement process were distributed for comment to local agencies and other major stakeholders. A Stakeholder Forum was held November 22, 1999 to receive comment on these materials. More detail on agency and public stakeholder input is provided in the next section.

Input received at the Forum was used to reduce the number of alternative alignments to be analyzed in this study from fifteen to eight. The short-listed alternatives are highlighted in Figure 2. They are comprised of combinations of three alternative routes in the southern portion of the region (I-8/SR85, I-10 with the Riggs Road Bypass, and I-10) with three in the northern portion (Loop 303, Sun Valley Parkway with an extension to US 60, and Wickenburg Road/Vulture Mine Road). The evaluation criteria established were cost, travel time, route length, level of service, access to freight terminals, constructability, safety, environmental impacts, Title VI and Environmental Justice impacts, and major community impacts.

The consulting firm Kimley-Horn and Associates Incorporated was retained to conduct research and collect field data to support the development of conceptual recommendations for needed infrastructure improvements and cost estimates for each of the short-listed alternative routes. The data compiled were organized for each of the routes according to the criteria established at the November 1999 Stakeholder Forum. The detailed results for each of the routes considered in the field review are contained in a separate report<sup>1</sup>.

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<sup>1</sup> Kimley-Horn and Associates Inc., 2000, “Compilation of Evaluation Data for Designation of the CANAMEX Corridor through the Maricopa Region”, July. Copies may be obtained from ADOT or MAG.



**Figure 2: Master List of CANAMEX Corridor Options for Maricopa County**

## **AGENCY AND PUBLIC STAKEHOLDER INPUT**

In addition to input received at the first Stakeholder Forum, agency stakeholder and public input was obtained at meetings where presentations on the project were made. Meetings included those of MAG Committees, the Governor's Vision 21 Transportation Task Force, the Citizens' Transportation Oversight Committee (CTOC), and WESTMARC interested parties. Additional input was received from MAG member municipalities, who were surveyed for their perspective on potential impacts and benefits of the corridor to their jurisdictions. Their feedback, as noted below, was considered under "Major Community Impacts", which is one of the criteria applied to assess the alternative routes for this project<sup>2</sup>.

Significant comment has been received. Approximately two hundred letters and email have been received from the public and representatives of local governments. The majority of the correspondence has been from Sun City Grand and Surprise area residents that oppose consideration of Loop 303 as one segment of the CANAMEX Corridor through the Maricopa region. The reasons cited were generally health, noise and safety relating to increased truck traffic.

Representatives of Sun City Grand, the City of Surprise and one member of the Maricopa County Board of Supervisors sent letters opposing any consideration of Loop 303 for the Corridor. The City of Surprise supported an alignment involving the Sun Valley Parkway in place of Loop 303. Additionally, on March 9, 2000, the Council of the City of Surprise passed a resolution stating their opposition to the designation of Loop 303 as part of the CANAMEX route. The City of Goodyear however indicated support for the designation of Loop 303 in their "Regional Transportation Vision and Recommendations" document dated February 29, 2000.

The City Manager from the Town of Buckeye has opposed any alignment involving the Sun Valley Parkway, although the Mayor of Buckeye has indicated that he would not oppose the designation. The City Manager from the Town of Buckeye indicated support for a position that Loop 303 warranted study as a viable alternative "despite the letter-writing campaign from Sun City residents". Landowners/developers in the vicinity of the Sun Valley Parkway alternative have also written to oppose consideration of that facility for the CANAMEX Corridor. The Town of Wickenburg however supported alignments involving either the Sun Valley Parkway or Wickenburg Road, with either connecting to Vulture Mine Road.

The City of Phoenix voiced support for the alignments involving I-10 and I-17, and opposition to use of the South Mountain Parkway for the CANAMEX Corridor. The City of Glendale indicated their support for a bypass around the Town of Wickenburg as a necessary element of any alternative considered. They also reiterated their opposition, voiced at the November 1999 Stakeholder Forum, to consideration of Loop 101 and of Grand Avenue south of Loop 303, due to existing traffic congestion.

A Stakeholder Forum will be held on July 24, 2000 to review the draft report findings and staff recommendation. Additional public input opportunities will be scheduled following the Forum. After considering the input received, a final recommendation will be made for approval by the MAG Regional Council and the State Transportation Board. Copies of letters and email received to date are available for review upon request.

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<sup>2</sup> See the Kimley-Horn report previously noted for detail of the evaluations against the other criteria.



## **RECOMMENDED ROUTE**

### **Location**

Starting from the junction of I-8 and I-10 and proceeding westward and northward, the recommended route for designation as the CANAMEX Corridor through the Maricopa region is: I-8, SR 85, I-10, the Sun Valley Parkway (extended north to US 60), US 60, the Wickenburg Bypass, and US 93. The exact alignments for the Sun Valley Parkway extension and the Wickenburg Bypass have not yet been determined. This option, listed as Option #1 in the Kimley-Horn & Associates report and shown in Figure 1, provides the following advantages:

- it is the lowest cost alternative that does not include Loop 303. Loop 303 has a significantly larger existing community that would be impacted than does the Sun Valley Parkway.
- it benefits safety. As a bypass route around the central metropolitan area, it helps to reduce the amount of commercial traffic that might otherwise move through the congested downtown area. It thereby helps to reduce the number of urban conflicts as well as the movement of hazardous materials within the urban area. The recommended upgrading of facilities to meet CANAMEX corridor design standards (see Table 1 below) should also benefit safety.
- it benefits air quality. As a bypass route, it helps to reduce emissions of particulate air pollution associated with commercial traffic moving through the congested downtown area. Particulate emissions from diesel-powered vehicles also contribute to the "brown cloud" effect that is a significant concern in the region. Also, it is expected to have only low to moderate expected environmental impacts within the existing right of way for the Sun Valley Parkway.
- it has no identified significant impacts to Title VI or environmental justice protected populations.
- it has the minimum peak period travel time and next to best level of service for through traffic among the eight alternatives assessed.
- it makes use of an existing truck route, namely SR 85, which already carries significant commercial traffic and is already programmed for substantial improvements as part of an upgrade to a four lane divided facility.
- it allows for the more efficient use of the existing transportation investment in the Sun Valley Parkway, which is considered underutilized to date.
- it provides a new choice for a route for commercial and other traffic around the central metropolitan area.

and

- it has among the most positive and least negative public and agency support of the alternatives considered.

The designation of the CANAMEX Corridor through the Maricopa region as specified above should be incorporated into federal legislation as a component of the federally designated CANAMEX Corridor. This action would make the Maricopa region portion of the CANAMEX Corridor eligible for federal funding to be earmarked for high priority corridors in the national highway system.

## **Guidelines**

The guidelines listed below are intended to represent minimum design elements for the CANAMEX Corridor. These are in addition to any federal and state requirements.

**Table 1: Guidelines for the CANAMEX Corridor within Maricopa County**

<b>Design Element</b>	<b>Guideline</b>
No. of Lanes (Total both directions)	4 (divided)
Incident Management System, Travel Advisories	In place or planned, where warranted.
Truck Facility Design Criteria	Satisfies or will satisfy minimum federal and state criteria for truck facility design (including pavement and geometrics).
Access Control	Fully or partially controlled.

## **COSTS**

Satisfying the design guidelines for the CANAMEX Corridor will require improvements to existing routes in addition to new infrastructure. Costs for improvements to existing infrastructure are listed in Table 2. Additions to infrastructure for purposes of the CANAMEX Corridor include a bypass around the Town of Wickenburg and the extension of the Sun Valley Parkway north to connect to US 60. Costs for these additions are also listed in Table 2.

A bypass around Wickenburg is considered an essential element of the recommended route for the CANAMEX Corridor in order to minimize delays for commercial and other traffic along this section of the Corridor. Alternatives for a bypass are currently under consideration in a study being conducted by the Arizona Department of Transportation.

The alternatives under consideration for the Wickenburg bypass include both ultimate and interim configurations, with the former costing significantly more than the latter. For purposes of the designation of the CANAMEX Corridor, no specific recommendation is being made on the choice of the ultimate or interim configuration at this time.

The extension of the Sun Valley Parkway north to US 60 was explicitly included among the options considered for the CANAMEX Corridor. The recommended routing for the CANAMEX Corridor along the Sun Valley Parkway is not feasible without this new infrastructure. In addition to the costs for the extension, some additional costs may be incurred in the process of limiting access for the portion of the existing Parkway between I-10 and Bell Road. However, the goal would be to limit access through the development process.

Construction of the recommended projects would be phased in over time, with costs phased correspondingly. Additionally, to save costs, action to obtain right of way for the Sun Valley Parkway extension to US 60 may occur well in advance of construction. The planning cost estimates for all of the improvements to existing infrastructure and additions of new infrastructure ranges from approximately \$45 million, which would provide for a two lane extension of the Sun Valley Parkway and an interim bypass for Wickenburg, to approximately \$500 million (year 2000 dollars). The latter cost corresponds to construction of the ultimate concept for each segment of the corridor.

## **FUNDING**

### **Federal**

In total, \$58 million in federal funds has been received for CANAMEX Corridor - related projects in Arizona since the passage of TEA-21. Approximately \$47 million of that total was for work on the Hoover Dam Bypass project. A total of \$1.13 billion from various sources has been programmed for CANAMEX Corridor projects for the period 1990 to 2004, not including improvements or additions to infrastructure within the Maricopa region.

While federal funding assistance for CANAMEX Corridor projects appears limited currently relative to the costs that will be involved in developing the corridor, other federal sources of revenue may be available and increased funding may be made available in the longer term.

### **Programmed Funds**

Funding has been programmed for improvements to portions of the recommended CANAMEX Corridor within the Maricopa region, primarily for SR 85. The draft MAG 2001-2005 Transportation Improvement Program includes approximately \$53.8 million for improvements to SR 85 to take portions of it to a four-lane facility. Funds of \$1.5 million in 2005 have also been programmed for a design study for the Wickenburg Bypass.

## **DECISION MAKING PROCESS**

The draft recommendation made by this project was guided by input received from agency representatives, key stakeholders and the public. Input was received at a Stakeholder Forum held in November 1999 and via correspondence as noted previously. Input to be received in consultation on this draft recommendation will be considered before a final recommendation is made to the MAG Regional Council and State Transportation Board (STB) for their consideration and approval.

Federal law requires that all federally-funded and any regionally-significant recommended transportation infrastructure improvements within the Maricopa region be accepted by the MAG Regional Council for inclusion in the MAG Transportation Improvement Program (TIP) and associated Long Range Transportation Plan (LRTP) before the respective projects can be implemented. Inclusion in the LRTP requires a funding plan.

**Table 2: Approximate Costs for the CANAMEX Corridor through the Maricopa Region**

Segment	Costs (millions)		Description
	<u>Low*</u>	<u>Ultimate</u>	
I-8	\$ 0.0	\$ 0.0	No improvements required for CANAMEX purposes (I-10 to SR 85 segment).
SR 85	0.0	257.8	Ultimate is upgrade to 4 lane freeway, with interchanges and frontage roads per June 2000 Design Concept Report (I-8 to I-10).
I-10	0.0	0.0	No improvements required for CANAMEX purposes (SR 85 to Sun Valley Parkway).
Sun Valley Parkway	25.0	40.0	New infrastructure to extend to US 60 (from Bell Road). Low is two lanes; ultimate is four lanes.
US 60	0.0	0.0	No additional improvements required for CANAMEX purposes.
Wickenburg Bypass	20.0	200.0	Interim v. Ultimate configuration
<b>TOTAL</b>	<b>\$ 45</b>	<b>\$498</b>	

\* The cost estimate for the Sun Valley Parkway extension is based upon a two lane facility with sufficient width to accommodate truck traffic.

After MAG and STB approvals, the designation of the CANAMEX Corridor through the Maricopa region will be recommended for incorporation into legislation as a component of the federally designated CANAMEX Corridor. This action would make the Maricopa region portion of the CANAMEX Corridor eligible for federal funding to be earmarked for high priority corridors in the national highway system.

# EXECUTIVE SUMMARY

## Compilation of Evaluation Data for Designation of the CANAMEX Corridor Through the Maricopa Region

Prepared for  
Arizona Department of Transportation  
Maricopa Association of Governments  
July 2000



Kimley-Horn  
and Associates, Inc.

## PURPOSE AND OBJECTIVES

The Arizona Department of Transportation (ADOT) and the Maricopa Association of Governments (MAG) are cooperating in the designation of a specific route for the CANAMEX Corridor in the Maricopa Region. As part of the route designation process, ADOT and MAG will perform a high-level evaluation of eight alternative routes that were selected in MAG-sponsored forums with agency representatives and stakeholders from within the MAG region. The evaluation will assess each alternative route using ten evaluation criteria. The evaluation of alternative CANAMEX Corridor routes in the Maricopa Region will result in the selection of a preferred route and a planning-level cost estimate for constructing route improvements.

Kimley-Horn and Associates, under contract to ADOT, provided technical assistance to ADOT and MAG in support of the high-level evaluation of route alternatives. Specifically, available information was compiled for each alternative route according to each evaluation criterion. A field review of route conditions was conducted to supplement and confirm compiled information.

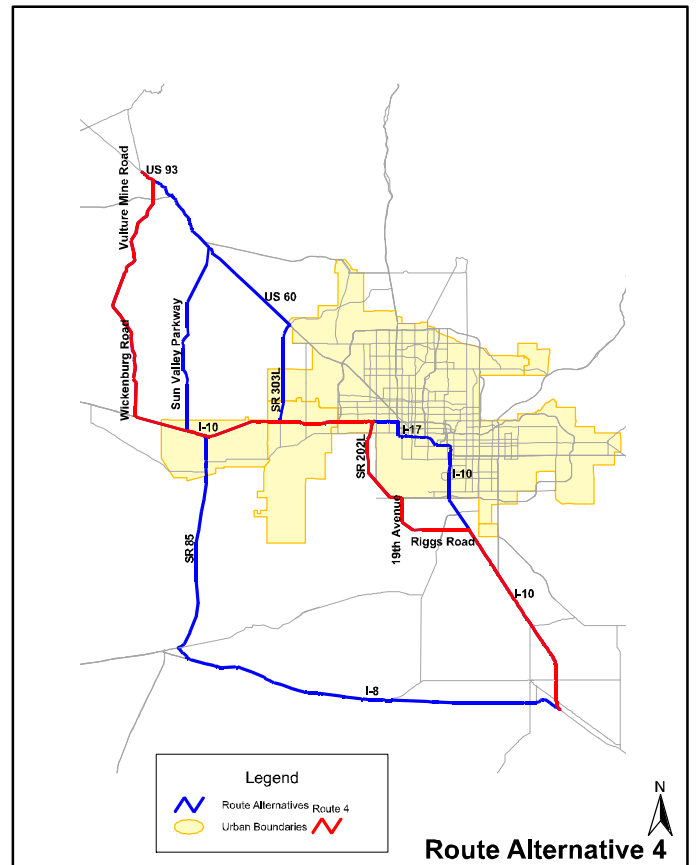
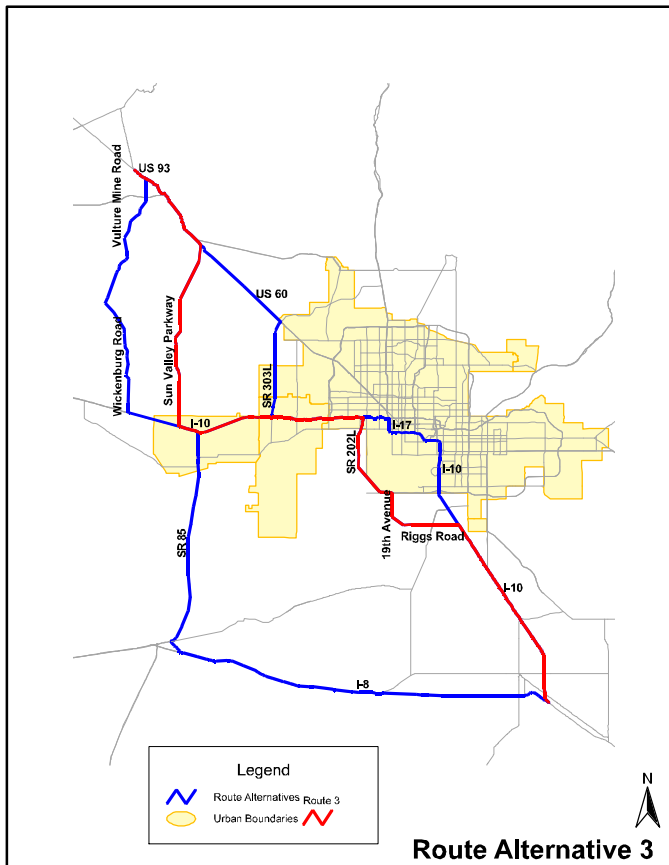
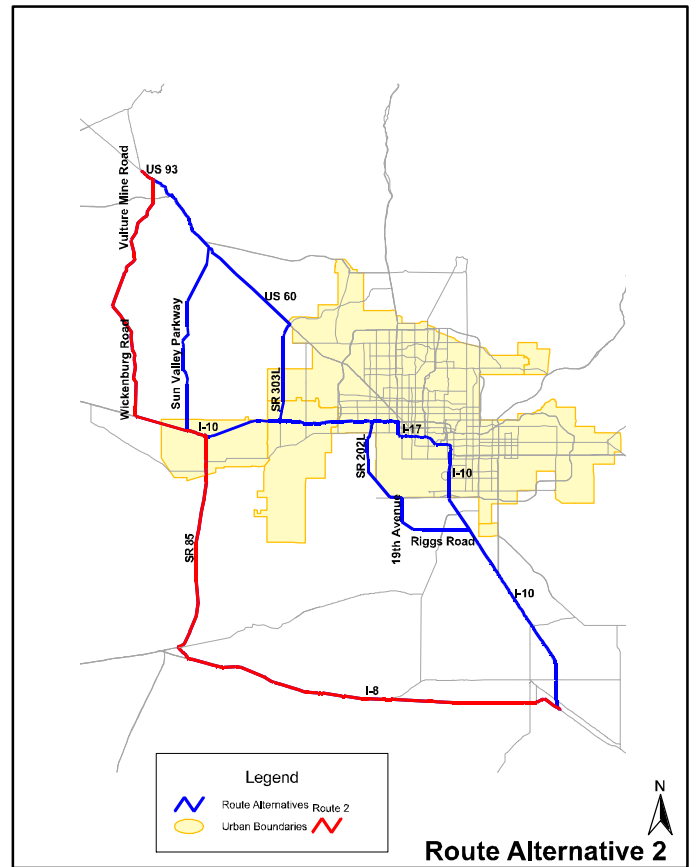
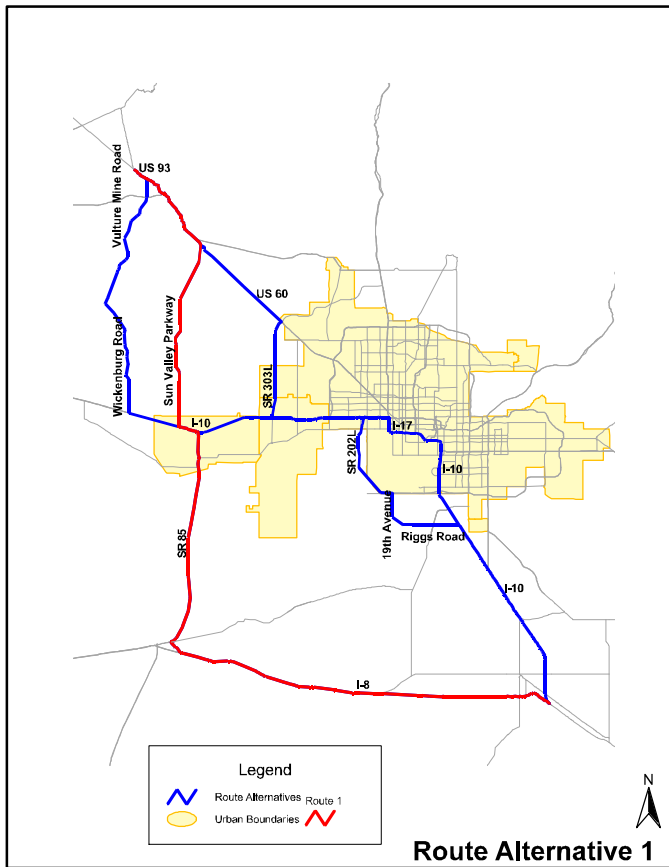
## ROUTE ALTERNATIVES

From an initial list of fifteen route alternatives, eight CANAMEX Corridor route alternatives in the Maricopa Region were identified for further consideration. For the purpose of this study, all routes were defined with common termini; the I-10/I-8 interchange near Casa Grande, Arizona on the south and the SR 93/Vulture Mine Road intersection near Wickenburg, Arizona on the north. The Wickenburg Bypass was not directly considered in the definition of CANAMEX route alternatives. However, issues associated with the use of the Wickenburg Bypass, as a segment of the CANAMEX Corridor will be considered in future continuing development of the preferred route alternative. **Exhibit ES1A** and **Exhibit ES1B** illustrate the eight route alternative, between the north and south termini.

## EVALUATION CRITERIA

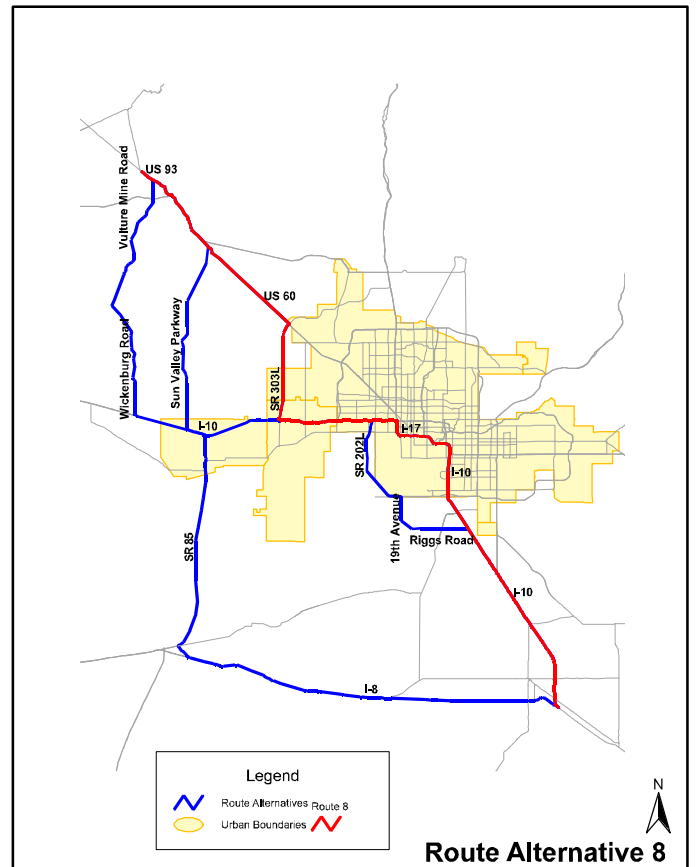
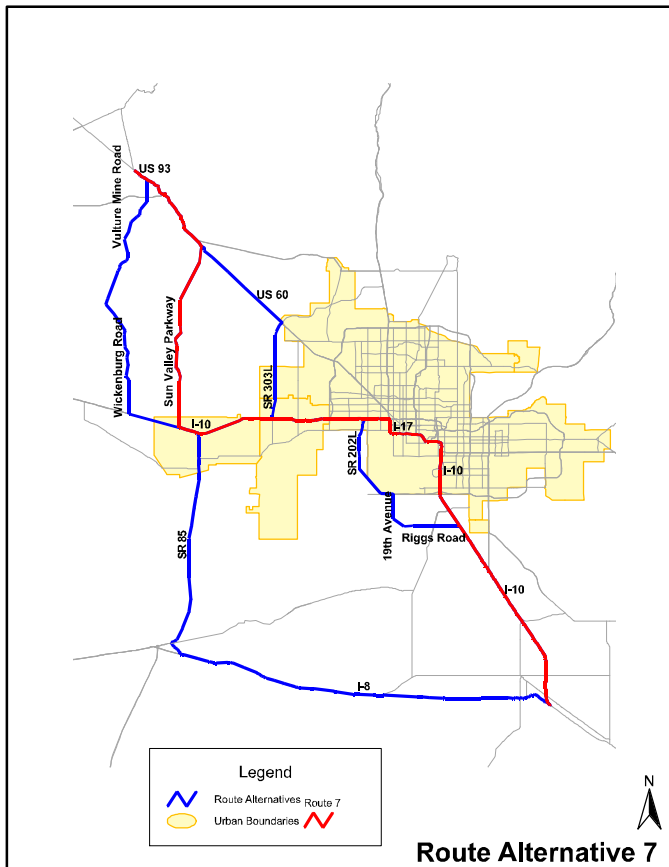
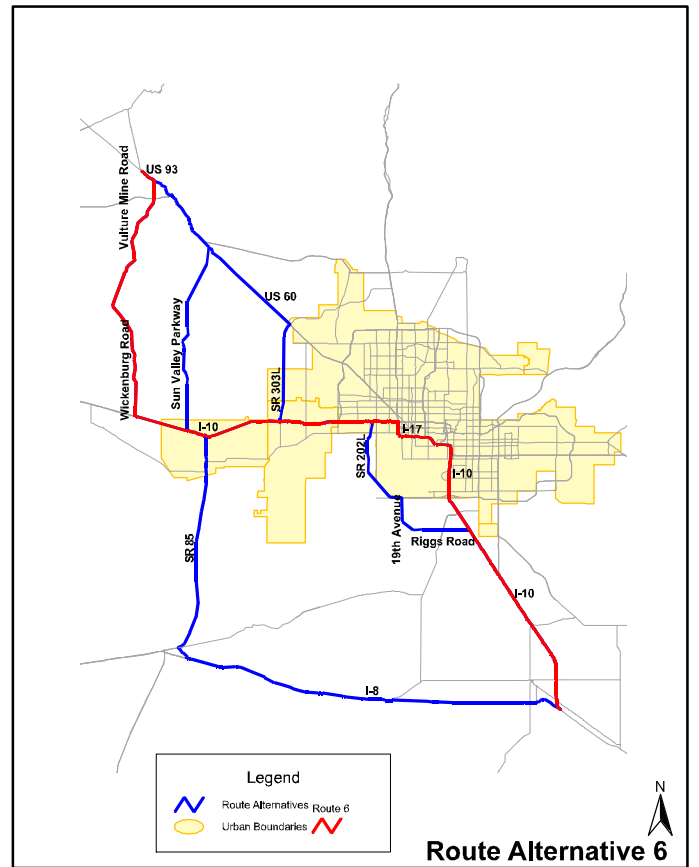
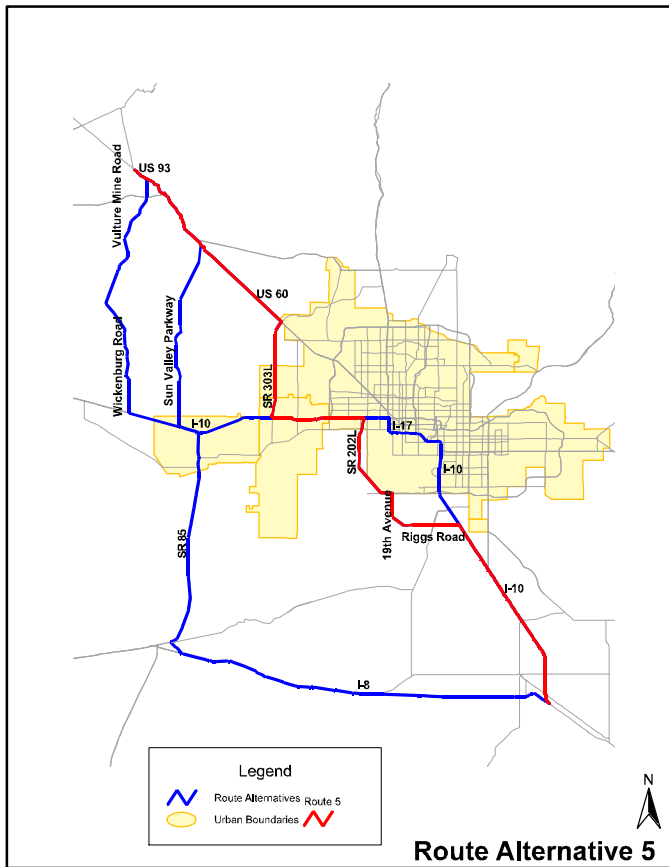
ADOT and MAG will evaluate and select a preferred CANAMEX route from among eight route alternatives using ten evaluation criteria. The evaluation criteria are listed below.

- Costs
- Travel Time
- Length
- Level of Service
- Access to Freight Terminals
- Constructibility
- Safety
- Environmental Impacts
- Title VI and Environmental Justice Impacts
- Major Community Impacts



## Exhibit ES1A - Route Alternatives 1 - 4





## Exhibit ES1B - Route Alternatives 5 - 8

**Exhibit ES2** summarizes for each route alternative the data gathered for each evaluation criterion. Criterion assessment results are provided below for two of the ten criteria (Environmental Impacts and Major Community Impacts).

To facilitate the review of criteria-related data, criterion definitions (developed by ADOT and MAG) and measure(s) of effectiveness are summarized below for each evaluation criterion.

## **COSTS**

### **MAG/ADOT CRITERION DEFINITION**

Capital cost of land acquisition and construction including all new infrastructure plus any rehabilitation of pavement, shoulders, medians, bridge and culvert structures, and roadway appurtenances.

### **MEASURES OF EFFECTIVENESS**

- Order-of-magnitude (planning-level) capital construction and right-of-way acquisition costs, in 2000 dollars, to upgrade existing roadway facilities or to construct new roadway infrastructure to a minimum pavement cross-section of 40-feet on 200-feet of right-of-way.
- Planning-level design, construction, and right-of-way acquisition costs for route segments currently programmed by MAG or ADOT (i.e., SR 202L).
- Planning-level costs for constructing projects and implementing transportation improvement needs on route segments.

## **TRAVEL TIME**

### **MAG/ADOT CRITERION DEFINITION**

Measured or estimated for peak and off-peak periods, for cross-regional trips.

### **MEASURES OF EFFECTIVENESS**

- Off-peak travel time (based on free-flow speed) expressed in minutes, between route alternative termini.
- Peak period travel time, expressed in minutes, between route alternative termini.

## **LENGTH**

### **MAG/ADOT CRITERION DEFINITION**

Total estimated or measured distance for the route through the Maricopa Region.

### **MEASURES OF EFFECTIVENESS**

- Length in miles between route termini for each route alternative.

ES2 - Summary of Evaluation Data

Criteria	Construction Cost of Land and Construction (1)		Travel Time				Route Length	Level of Service				Access to Freight Terminals (2)		Constructability		Safety	Environmental Impacts	Title VI (2)										Major Community Impacts
Route	Upgrade Capital Cost (millions)	Programmed Capital Costs (millions)	Existing Peak (minutes)	Existing Off-Peak (minutes)	Future Peak (minutes) (2)	Future Off-Peak (minutes) (2)	Length (miles)	Existing (Threshold is the Summation of LOS C or worse for Rural Roadways and LOS E or worse for Urban Roadways)		Future (Threshold is LOS D or Worse) (2)		Existing (Threshold is Route Alternatives within Areas with 0.41 Trucking and Warehouse facilities Sites Per Square Mile)		Construction Difficulty	Construction Impacts on Surrounding Area	Tractor Trailer Involved Crashes (November 1996 through October 1999)		Low Income (Route Alternative Within or Adjacent to Area with One or More Households in Poverty Per Acre)		Minority (Route Alternative Within or Adjacent to Area with Greater than Twenty-One Percent Percent Racial Minority Population)		Elderly (Route Alternative Within or Adjacent to Area with Greater than Twenty Percent Percent Population Aged 60 Years and Older)		Disabled (Route Alternative Within or Adjacent to Area with Greater than Three Percent Population with Disability or Transportation Limitations)		Gender (Route Alternative Within or Adjacent to Area with Greater than Forty-Nine Percent Female Population)		
								Length (miles)	Percentage (of total)	Length (miles)	Percentage (of total)	Length (miles)	Percentage (of total)					Length (miles)	Percentage (of total)	Length (miles)	Percentage (of total)	Length (miles)	Percentage (of total)	Length (miles)	Percentage (of total)	Length (miles)	Percentage (of total)	
1	\$25	\$0	156	156	139	131	145.4	1.0	1%	13.4	9%	0.0	0%	Moderate	Low	72		0.0	0%	0.0	0%	0.0	0%	0.0	0%	0.0	0%	
2	\$121	\$0	155	155	157	157	149.9	0.5	0%	10.9	7%	0.0	0%	Low	Moderate	74		0.0	0%	0.0	0%	0.0	0%	0.0	0%	0.0	0%	
3	\$31	\$225	154	152	150	120	138.0	9.9	7%	48.7	35%	0.7	1%	Moderate	Low	241		2.9	2%	14.0	10%	0.0	0%	6.2	4%	2.5	2%	
4	\$132	\$225	153	151	168	146	142.6	9.4	7%	46.2	32%	0.7	1%	Low	Moderate	243		2.9	2%	14.0	10%	0.0	0%	6.2	4%	2.5	2%	
5	\$18	\$225	154	152	148	120	126.2	9.9	8%	57.5	46%	0.7	1%	Low	High	261		3.7	3%	14.6	12%	0.8	1%	9.0	7%	2.8	2%	
6	\$121	\$0	151	146	188	153	141.5	13.1	9%	64.5	46%	11.4	8%	Low	Moderate	540		10.1	7%	20.8	15%	1.0	1%	9.1	6%	5.9	4%	
7	\$25	\$0	153	147	169	126	136.9	13.6	10%	67.0	49%	11.4	8%	Moderate	Low	538		10.1	7%	20.8	15%	1.0	1%	9.1	7%	5.9	4%	
8	\$7	\$0	152	147	167	126	125.1	13.6	11%	75.8	61%	11.4	9%	Low	High	558		10.9	9%	21.3	17%	1.8	1%	12.0	10%	6.2	5%	

Notes  
(1) Does not include construction costs for upgrading SR 303 to parkway facility or for constructing the Wickenburg Bypass.  
(2) Only data within MAG Planning Region were available for this criterion.

## **LEVEL OF SERVICE**

### **MAG/ADOT CRITERION DEFINITION**

Qualitative measure of highway operation under given traffic, physical, and operational conditions.

### **MEASURES OF EFFECTIVENESS**

- Percentage of total miles for each route alternative exceeding ADOT level of service criteria for urban and rural roadways under current traffic, physical, and operational conditions.
- Percentage of total miles for each route alternative exceeding level of service D under 2020 traffic, physical, and operational conditions.

## **ACCESS TO FREIGHT TERMINALS**

### **MAG/ADOT CRITERION DEFINITION**

Route within acceptable distance to terminal destinations.

### **MEASURE OF EFFECTIVENESS**

- Percentage of total miles for each route alternative located within or adjacent to areas with trucking and warehouse facility densities of greater than 0.41 sites per square mile.

## **CONSTRUCTIBILITY**

### **MAG/ADOT CRITERION DEFINITION**

Minimal difficulty in constructing a project and minimal significant short-term impacts on the immediate surrounding area.

### **MEASURES OF EFFECTIVENESS**

- Qualitative rating of relative degree of construction difficulty expressed as high, moderate, or low levels of difficulty.
- Qualitative rating of relative adverse impacts of construction on surrounding areas expressed as high, moderate, or low levels of adverse impacts.

## **SAFETY**

### **MAG/ADOT CRITERION DEFINITION**

Suitable geometrics and environment for truck traffic and crash history.

### **MEASURE OF EFFECTIVENESS**

- Truck-involved crash frequency for the period, November 1996 through October 1999

## ENVIRONMENTAL IMPACTS

### MAG/ADOT CRITERION DEFINITION

Air quality, visual impacts, species habitat impacts, sensitive noise receptors, proximity to existing/future historic properties, or high-density archaeological sites, and proximity to wilderness areas.

### MEASURES OF EFFECTIVENESS

- Listing of fatal environmental flaws that preclude upgrading a particular route segment or selecting a particular route alternative.
- Rating of significance of environmental regulatory requirements (in the form of a regulatory compliance matrix).

### CRITERION ASSESSMENT RESULTS

Information for this criterion was compiled based on limited field review, limited research, and environmental judgement based on experience with similar projects. It is therefore difficult to make absolute projections about regulatory issues. While this regulatory assessment and field review did not note fatal flaws that would prevent the upgrading of a particular route nor preclude the selection of any route alternative, further analysis may identify significant impediments to upgrade and/or selection of a specific route alternative. Additional study of the preferred route alternative is recommended to determine more precisely the status of the various regulatory issues, as well as to insure that other previously unidentified regulatory issues are not overlooked.

Specific design details will affect regulatory compliance. As an example, if the preferred route alternative requires minimal upgrading of the existing roadway and limited construction activity it will be less likely to have significant regulatory compliance issues. Conversely, if the preferred route is requires substantial upgrading, with extensive construction activity, the regulatory compliance issues will be more complex.

**Exhibit ES3** summarizes the results of the regulatory compliance evaluation.

### Exhibit ES3 - Regulatory Compliance Summary

Route	Regulatory Constraint				
	Clean Water Act	Endangered Species Act	National Historic Prevention Act	NEPA	Prime Otherwise Designated Soils
Route 303	Low	Low	Low	Low	Moderate
Sun Valley Parkway	Low	Low/Moderate	Low	Low	Low
Wickenburg Vulture Mine	Significant	Significant	Significant	Significant	Low
Riggs Road/19th Ave.	Low	Low	Moderate/Significant	Moderate	Low

It should be noted that the rating system is not a ranking system (i.e. a significant rating is not three times as difficult as a low rating), but is meant to convey the potential level of regulatory compliance complexity that the various routes may encounter. No matter what rating each route segment is assigned, it will require some level of documentation. A low rating is anticipated to require less evaluation, documentation, and potential compensatory mitigation as a high rating. While these ratings do take in to account the potential applicability of each regulation for each route, a low rating is not meant as a final indication that a regulation is not applicable.

## **TITLE VI AND ENVIRONMENTAL JUSTICE IMPACTS**

### **MAG/ADOT CRITERION DEFINITION**

Impacts on persons who have limited transportation opportunities, including elderly, disabled, and low-income individuals.

### **MEASURES OF EFFECTIVENESS**

- Percent of total route length within or adjacent to areas with greater than 21 percent racial minority population, as tabulated in the 1995 special census.
- Percent of total route length within or adjacent to areas with greater than 20 percent population aged 60 years and older, as tabulated in the 1995 special census.
- Percent of total route length within or adjacent to areas with one or more household in poverty per acre, as tabulated in the 1995 special census.
- Percent of total route length within or adjacent to areas with greater than 3 percent population with disability or transportation limitations, as tabulated in the 1995 special census.
- Percent of total route length within or adjacent to areas which are comprised of 50 percent or more females, as tabulated in the 1995 special census.

## **MAJOR COMMUNITY IMPACTS**

### **MAG/ADOT CRITERION DEFINITION**

Major impacts, including economic development to existing and planned residential neighborhoods located near the corridor.

### **MEASURES OF EFFECTIVENESS**

- Public perceptions on advantages and disadvantages of each route alternative.
- Public support and opposition for each route alternative.

### **CRITERION ASSESSMENT RESULTS**

Assessment of agency, stakeholder, and public input during the route designation and development process is an ongoing responsibility of MAG and ADOT. Refer to the “Joint Recommendation for the CANAMEX Corridor Through the Maricopa Region” for a summary of public input.